

## REMARKS

Claims 33, 35, 41, 42, 47, 48, 53, 54, 59, 60, and 65 remain in the application. Favorable reconsideration is respectfully requested.

The sole rejection of the now-pending claims as being obvious in view of a combination of Dahringer et al. (U.S. Patent No. 5,726,107) in view of Kahlbaugh et al. (U.S. Patent No. 5,364,456), Bond et al. (US 2002/0168912), and Pike et al. (U.S. Patent No. 6,090,731) is respectfully traversed because the combination of references does not teach or suggest the positive limitations of the claims.

With respect to the Dahringer et al. patent, Applicants respectfully note that, contrary to the Office's interpretation of this patent, Dahringer et al. do not teach a blended non-woven construction wherein the charge treatment completely saturates the sheets. Specifically, Applicants direct the Examiner's attention to the paragraph at column 4, lines 54-58 of the Dahringer et al. patent (emphasis added):

It may be expedient from case to case to employ mixed linear densities, and **in particular electret fibers and normal fibers can have different linear densities in those non-wovens which do not comprise electret fibers to the extent of 100%.**

This passage in Dahringer et al. is unequivocal: the overall construction can have fibers of different linear densities **only** when Dahringer's construction also includes non-electret "binding fibers." (See Dahringer et al. at col. 3, lines 13-16 regarding electret and non-electret fibers.) The Dahringer et al. patent is totally silent on using fibers of different linear densities when 100% of the fibers are electret fibers.

As a necessary result, Dahringer et al. cannot describe a blended non-woven product wherein the charge treatment completely saturates the sheets (as required by all of the now-pending claims). The only time Dahringer et al. describe using fibers of different linear density is when a portion of the fibers "do not comprise electret fibers." If a portion of the fibers "do not comprise electret fibers" the charge treatment (which is only present on the electret fibers) cannot "completely saturate" the sheets as required by the present claims.

These two aspects of Dahringer's fiber are mutually exclusive. The passage quoted above states that Dahringer's fiber can have different linear densities "in those non-wovens which do not comprise electret fibers to the extent of 100%" If the non-woven is not comprised of 100% electret fibers, the charge treatment cannot "completely saturate" the non-woven sheet (as required by the

present claims); the portion of the non-woven sheet made of non-electret material will have no charge treatment at all. So even if the electret portion of the fibers are fabricated in a sheath-core fashion (as noted at the top of page 3 of the Final Office Action), a portion of Dahringer's sheet will be totally devoid of charge treatment.

Conversely, the above-quoted passages also indicates that when Dahringer's fiber is comprised of 100% electret fibers, those fibers all have the same linear density. In this instance, the electret material would extend the charge treatment throughout the material. But, the non-woven material cannot be considered "blended" as required by the present claims. That is, the fibers would all have the same linear density, and thus not be a blend of microfine- and fine-denier fibers as required, for example, in Claim 41.

This shortcoming is not cured by combining Dahringer et al. with any or all of Kahlbaugh et al., Bond et al., and/or Pike et al. because none of these references describe the claimed structure, wherein the fibers are blended, the layers are needle-punched into a graded-density structure, and the charge treatment complete saturates the sheets.

Kahlbaugh et al. do describe a gradient depth filter. However, combining Kahlbaugh et al. with Dahringer et al. yields a **non-blended** electret non-woven sheet as taught by Dahringer, arranged in Kahlbaugh's density gradient. The present claims, however, require that the fabric be blended. Alternatively, the combination uses Dahringer's blended material that comprises electret material and non-electret material, also arranged in Kahlbaugh's density gradient. However, in this scenario, the filter material will not be completely saturated with charge treatment because the non-woven itself will contain non-electret fibers. The present claims require a blended non-woven that is completely saturated with charge treatment. The combination of Dahringer et al. with Kahlbaugh et al. simply does not disclose or suggest such an arrangement.

Combining Dahringer et al. and Kahlbaugh et al. with Bond et al. does not cure the shortcomings of the two-way combination because Bond et al. is cited solely for its description of polyamide-epichlorohydrin (PAE), which Bonds et al. **do not** use as a charge treatment. Nevertheless, even if the combination is made, the combination does not yield the invention positively recited in the claims. Combining Dahringer et al. with Kahlbaugh et al. and with Bond et al. yields a **non-blended**

electret non-woven sheet as taught by Dahringer, arranged in Kahlbaugh's density gradient, and using Bond's PAE as the charge treatment. Again, however, the present claims require that the non-woven material be blended. Dahringer et al. note that the fibers can be of different linear densities only when the non-woven includes both electret fibers and non-electret fibers.

Alternatively, the three-way combination of Dahringer, Kahlbaugh, and Bonds uses Dahringer's blended material that comprises electret material and non-electret material having a different linear density, also arranged in Kahlbaugh's density gradient, and using PAE as the charge treatment as described by Bonds et al. However, in this combination, even though the electret fibers use Bonds' PAE charge treatment, the filter material itself will not be completely saturated with the charge treatment because the non-woven will contain non-electret fibers as required by Dahringer et al. The present claims require a blended non-woven that is completely saturated with charge treatment. Thus, the three-way combination of Dahringer et al. with Kahlbaugh et al. and with Bonds et al. neither discloses nor suggests such an arrangement.

Adding Pike et al. to the combination also does not cure the shortcomings noted above because Pike is cited solely for a density range that overlaps the presently recited density range. The underlying composition, however, would remain that same as the combination of Dahringer et al., Kahlbaugh et al., and Bonds et al. Thus, the full combination of Dahringer et al., Kahlbaugh et al., Bonds et al. and Pike et al yields a **non-blended** electret non-woven sheet as taught by Dahringer, arranged in Kahlbaugh's density gradient, using Bond's PAE as a charge treatment, and having a density range as recited in Pike et al. But the present claims require that the non-woven material be blended. Dahringer et al. note that the fibers can be of different linear densities only when the non-woven includes both electret fibers and non-electret fibers. Combining the four references in this fashion yields a non-blended construction.

Alternatively, the full combination of Dahringer et al., Kahlbaugh et al., Bonds et al. and Pike et al. uses Dahringer's blended material that comprises electret material and non-electret material having a different linear density, arranged in Kahlbaugh's density gradient, using Bond's PAE as the charge treatment, and having a density as noted in Pike et al. However, in this combination, even though the electret fibers use Bonds' PAE as a charge treatment and have a density as described in Pike et al., the filter material itself **will not** be completely saturated with the charge treatment because the non-woven

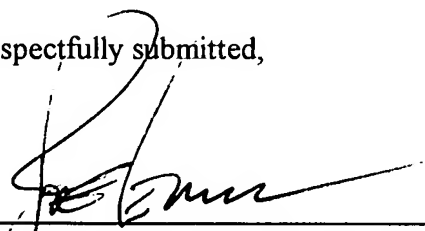
itself will contain non-electret fibers as required by Dahringer et al. The present claims, however, require a blended non-woven that is completely saturated with charge treatment. Therefore the full four-way combination of Dahringer et al., Kahlbaugh et al., Bonds et al., and Pike et al., taken in full, or in any combination, does not disclose or suggest the invention as claimed.

Applicants therefore respectfully submit that the §103(a) rejection in view of Dahringer et al., Kahlbaugh et al., Bonds et al., and Pike et al. is untenable. Withdrawal of the rejection is respectfully requested.

### CONCLUSION

Applicants submit that the application is now in condition for allowance. Early notification of such action is earnestly solicited. The Commissioner is authorized to charge any fees or credit any overpayments relating to this application to deposit account number 18-2055.

Respectfully submitted,

  
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